EOEEA BEST PRACTICES "PAGE 2" INFORMATION

Energy Efficiency and Renewable Energy – Best Practices and Resources

By cutting energy use from city and town buildings, vehicles, and other facilities municipalities can save money and reduce greenhouse gas (GHG) and other air pollutant emissions. Energy from solar, wind, and other renewable energy facilities can also reduce municipal energy costs while advancing climate change goals. Many options exist for municipalities to pursue energy related Best Practices. There are established programs that a municipality can choose to pursue as a Best Practice, such as Green Communities. In addition, there are many individual Best Practices municipalities can choose under the Community Compact. Energy efficiency and renewable energy generation may be advanced through the implementation of Best Practices that include the following:

Become a Green Community

Municipalities can commit to achieving Green Community status as a Best Practice. Doing so will earn the benefits of Community Compact signing as well as a Department of Energy Resources (DOER) grant. Thereafter the municipality will also be eligible for Green Communities competitive grants.

Extensive information on how to meet the criteria and become a Green Community is found here.

Pursue a Green Community Criterion

Municipalities that are ineligible or not interested in becoming a Green Community can pursue one or more of the following as a Best Practice (each of which will also meet a Green Community Criterion):

- **Adopt Zoning for Renewable Energy** (Green Communities Criterion 1)

  Adopting zoning for wind, solar, or other renewable energy facilities is another Best Practice a municipality could choose. Determining where and how such facilities can be sited is important to the future of the community, generation of clean power, and, through avoidance of sensitive sites, preservation of natural resources. In order to meet the Green Community requirements adopted zoning must be as of right. Also, in addition to zoning for renewable energy municipalities can also qualify by zoning for energy related manufacturing and research and development facilities.

  Guidance from DOER can be found here.
  Municipalities can seek assistance from their regional planning agency and apply for District Local Technical Assistance (DLTA) funding to address zoning for renewable energy.

- **Expedite Permitting for Renewable Energy** (Green Communities Criterion 2)

  Reducing uncertainty and making quick decisions in regard to permits for renewable energy facilities is another Best Practice a municipality may wish to pursue. This does not mean relaxing standards, simply making them clear and acting on applications expeditiously.

Guidance from DOER can be found here.

Municipalities can seek assistance from their regional planning agency and apply for District Local Technical Assistance (DLTA) funding to address expedited permitting for renewable energy.

- **Complete an Energy Use Baseline** (Green Communities Criterion 3)

  As a Best Practice a municipality could choose to establish an energy use baseline inventory for all municipal buildings (which includes school buildings, drinking water and wastewater treatment plants, pumping stations and parks), vehicles, and street and traffic lighting. This is basic information necessary to effectively manage municipal energy use.

  Guidance from DOER can be found here.

- **Produce an Energy Use Reduction Plan** (Green Communities Criterion 3)

  As a Best Practice a municipality could develop an Energy Reduction Plan, which in order to qualify under Green Communities must reduce energy use by twenty percent within five years.

  Guidance from DOER can be found here.

- **Purchase Fuel-Efficient or Electric Vehicles** (Green Communities Criterion 4)

  Vehicles with high fuel economy create smaller amounts of carbon dioxide - the most prevalent greenhouse gas. Since every gallon of gasoline burned emits about 20 pounds of carbon dioxide purchasing fuel efficient vehicles is one of the best ways to reduce GHG emissions and save on fuel costs. Municipalities pursuing this as Best Practice that wish to make themselves eligible to be a Green Community will need to adopt an official municipal Fuel Efficient Vehicle Policy that requires municipal departments and divisions to purchase only fuel efficient vehicles.

  Guidance from DOER can be found here.

- **Encourage or Require Energy Efficient & Sustainable Construction** (Green Communities Criterion 5)

  Those municipalities desiring to encourage green construction as a Best Practice could offer incentives to encourage developers/landowners to build efficient/sustainable buildings. Or, a municipality seeking to ensure that construction within its boundaries is designed and built above the energy efficiency requirements of the "Base" Energy Code may mandate adherence to the Stretch Code. Doing so will be an acceptable Best Practice & meet Green Communities Criterion five.

  Guidance from DOER can be found here.

Realize or Exceed a Green Community Obligation

Municipalities may choose to commit to additional measures necessary to address (or go above & beyond their current commitment level relative to) any of the five criteria they may not yet have

completed as part of their Green Community status. For example, many municipalities are still working to meet their commitment to reduce energy use by at least 20%, and additional actions may be needed. Alternatively, a community could choose to achieve an additional 10% reduction above and beyond the minimum as a Best Practice. Through this best practice, a municipality would work with its Green Communities Coordinator to successfully complete additional measures to comply with or go beyond their existing commitment to selected criteria.

Communities can find their Green Communities Coordinator here.

Obtain Green Community 2.0 Status

Municipalities that have met the 20% energy use reduction goal of Green Communities Criterion 3 and are otherwise compliant with their Green Community commitments way wish to establish a GHG reduction target as a Best Practice. For example, reduce municipal (or communitywide) GHG emissions by 25% below 1990 by 2020.

Construct Zero Energy Buildings (or communities):

As a Best Practice a municipality can choose to construct zero energy buildings (ZEBs), or encourage their construction by private parties. Since a zero energy building produces enough renewable energy to meet its own energy requirements, all aspects of building construction and use must be carefully considered. Naturally, since no fossil fuels are consumed to heat, cool, or power the building there are tremendous benefits including lower operating and maintenance costs, reduced environmental impact (no GHG emissions), and better resiliency. Of course, one could also imagine zero net energy communities as well.

Click here for more information on zero energy buildings.

Provide Electric Vehicle Infrastructure

Expand electric vehicle (EV) infrastructure. Placing charging stations at key municipal sites and encouraging their installation in private developments could be part of a commitment to install EV infrastructure a municipality chooses as a Best Practice.

Information on workplace charging through the Massachusetts Electric Vehicle Incentive Program (MassEVIP) can be found here, & information on electric vehicle infrastructure grants can be found here.

Complete a Community Wide Energy Audit & Manage Energy Consumption:

Hire (individually or in concert with other municipalities) an energy manager to use MassEnergyInsight or another tool to compile and analyze energy use data so that the community can establish and measure progress toward energy use reduction goals.

Click here for more information.

Undertake a Behavioral Based Effort to Reduce Energy Use

Employees and citizens can help reduce energy use through their actions. Behavioral efficiency programs and strategies are a cost-effective Best Practice a municipality could select as a way to reduce energy consumption. Peoples' behavior is responsible for wasting electricity – if people are provided data on their energy use and a means of reducing it they tend to do so.

Click here for more information.

Climate Change Mitigation – Best Practices and Resources

Climate Change is a growing threat to Massachusetts and doing our part to mitigate it by reducing greenhouse gas emissions is critical. Municipalities have an important role to play in meeting Massachusetts' statutorily required greenhouse gas reductions – 25% below 1990 emissions by 2020 and 80% below by 2050. Municipalities can do so directly through their actions, and indirectly through their plans, policies, and regulations. Taking steps to reduce green house gas emissions at the local level - the community's carbon footprint - will help decrease the inevitable risks that climate change will impose, making the municipality less vulnerable. Climate change mitigation may be advanced through implementation of Best Practices such as the following:

Plan Ahead

Establish goals and an action plan to realize them.

- Develop a municipal Climate Change Mitigation Plan, Energy Management Plan, or other document that outlines municipal goals, steps to attain them, and the parties responsible
- Establish a working group to track emissions and progress toward local goals/targets

Municipalities can seek assistance from their regional planning agency and apply for District Local Technical Assistance (DLTA) funding to complete an action plan.

Use Renewable Energy

Generating and using renewable energy instead of power produced through fossil fuel combustion reduces GHG emissions. Best Practices a community could pursue relative to renewable energy include:

- Generating solar or wind power on municipal buildings or property;
- Purchasing clean power for municipal use; and
- Zoning for solar, wind, and other renewable power generation (preferably as of right and in locations that avoid natural resource impacts).

Click here for more information on solar energy use.
Click here for more information on thermal energy use.
Click here for more information on wind energy use.
Click here for more information on biomass.
Click here for more information on advanced biofuels.
Municipalities can seek assistance from their regional planning agency and apply for District Local Technical Assistance (DLTA) funding to address zoning for renewable energy

Increase Energy Efficiency

Reducing power use also reduces fuel costs and GHG emissions. Best Practices a municipality could pursue relative to energy efficiency include:

- Conduct an energy audit of municipal buildings and develop a list of key recommendations for improving energy efficiency
- Reduce building energy use
    - Insulate & otherwise increase the building envelope efficiency of municipal buildings

    - Use fuel efficient heating, ventilating, and air conditioning systems
        - Install geothermal or renewable thermal systems
        - Use sustainably harvested wood for heating purposes
- Install LED lights in municipal buildings and/or municipal street lights
- Implement municipal purchasing policies that favor energy efficiency
    - Purchase energy efficient equipment (computers, appliances, etc.)
- Establish incentives to encourage developers/landowners to build efficient/sustainable buildings
- Educate municipal employees on energy efficient behaviors
- Plant trees to increase tree cover and realize the resulting energy use reductions

Click here for more information on municipal energy efficiency.

Promote Fuel Efficient Transportation

As a Best Practice a municipality could reduce its transportation sector GHG emissions as well as those of people living or working in the municipality. A municipality may elect to commit to:

- Buy zero emission or other fuel efficient vehicles
- Provide bike & pedestrian infrastructure via municipal projects and/or regulatory requirements
    - Adopt a Complete Streets Policy
- Make transit available and accessible through funding and/or conducive land use regulations
- Use zoning, subdivision, and other land use regulations to encourage alternatives to car travel
    - Examples: Establish helpful street design standards, create an interconnected street network, and reduce parking requirements.
- Provide electric charging stations & other clean vehicle infrastructure via funding & standards
- Educate drivers about means of reducing car travel, fuel consumption, and vehicle emissions
- Employ Transportation Demand Management to promote efficient use of existing infrastructure
- Encourage car sharing and pooling
- Manage parking through supply and pricing strategies

Click here for more information on the Massachusetts Zero Emission Vehicle Commission and Mass Drive Clean Campaign.
Click here for more information on the Massachusetts Electric Vehicle Incentive Program (MassEVIP) Incentive Program.
Click here for more information on alternative transportation.
Click here for more information on the Department of Transportation's Complete Streets Program.
Click here for the Massachusetts Smart Growth Toolkit.
Regional planning agencies have expertise in a number of listed items, including zoning and Transportation Demand Management, and municipalities can seek their assistance and apply for District Local Technical Assistance (DLTA) funding to address them.

Encourage Sustainable Development

Municipalities that provide easy access to jobs and services through mixed-use development, a connected street network, and pedestrian and bike infrastructure reduce car travel. Because the distance is short people can walk or bike for some trips, and car trips aren't as long. Recent studies show that by zoning for mixed-use neighborhoods of moderate density municipalities can reduce car

travel and associated GHG emissions by 30%. Where transit is available municipalities can further reduce car travel through transit oriented development that takes full advantage of the bus or train service. As a Best Practice a municipality may elect to commit to:

- Zone for mixed use and higher density
    - Traditional Neighborhood Development/Village Center Zoning
    - Transit Oriented Development

For more information see the Sustainable Development and Land Protection Best Practice.
Click here for the Massachusetts Smart Growth Toolkit.
Municipalities can seek assistance from their regional planning agency and apply for District Local Technical Assistance (DLTA) funding to address zoning for sustainable development.

Protect and Manage Natural Resources

Reducing the conversion of forest and other natural land cover to development and other land use types, protecting wetlands, and managing forests and agriculture to increase carbon storage in soils and vegetation are among the measures communities can undertake as a Best Practice to reduce carbon emissions. See Use Zoning & Other Land Use Regulations to Conserve Land, Protect Natural Resources, & Promote Smart Growth and Support Sustainable Forestry among other Energy and Environment Best Practices.

Reduce Municipal Solid Waste

Solid waste disposal contributes to increased GHG emissions. As a Best Practice a municipality could focus its efforts on reducing GHGs by decreasing the amount of municipal solid waste that is generated, especially the use and disposal of plastics. Potential Best Practices also listed under Solid Waste include:

- **Enhance Waste Ban Compliance**
- **Adopt Pay-As-You-Throw (PAYT)**
- **Increase the Recycling Rate**

Click here for the Massachusetts Department of Environmental Protection's Municipal Solid Waste Master Plan, and here for resources available through their Solid Waste and Recycling Programs.

For more information see the Solid Waste Best Practice

Conserve Water and Increase the Energy Efficiency of Municipal Water/Wastewater Systems

Water & Wastewater facilities consume a lot of electricity. Thus, they represent a prime opportunity to reduce municipal power use, electricity bills, and GHG emissions. Best Practices listed under Water Resources that also reduce GHG emissions include:

- **Implement Water Conservation Measures**
- **Implement Energy Efficiency Measures and Generate Clean Energy**

Click here for more information on managing water/wastewater systems.
Click here for more information on conserving water.

Click here for more information on implementing energy efficiency measures at Water/Wastewater Facilities.

For more information see the Water Resource Management or Energy Best Practice.
Energy and Environmental Affairs may also be able to connect a community with a member of the Massachusetts River Alliance or another conservation group willing to help with water conservation.

Climate Change Adaptation/Community Resilience – Best Practices & Resources

With increases in precipitation frequency and intensity, sea level and temperature, Massachusetts municipalities are potentially vulnerable to stormwater and riverine flooding, inundation from coastal storm surges and sea level rise, and extreme heat. The effects of climate change could adversely impact the health and safety of residents, and threaten municipal infrastructure, important natural resources, local businesses, and past investments. Climate Change Adaptation/Community Resilience may be enhanced by implementation of Best Practices such as the following:

Protect Vulnerable Populations

Community programs can be designed to decrease risk to people who are more susceptible to the effects of climate change, and for whom adaptive change will be more difficult. Whether due to their economic status, language, social capacity and resources, health, age, or geography, these vulnerable populations have unique needs. Through this Best Practice, a municipality would identify their vulnerable populations and implement programs to help to inform and protect them against the effects of extreme events and to adapt to project long-term impacts of climate change. Examples of such community programs include those that address health issues exacerbated by climate change, energy costs, flooding of basements and other structures, extreme heat, risk and prevention, improved communication/notification, and neighborhood relationship building.

Click here for additional information on vulnerable populations from the Department of Health.
Click here for the Department of Public Health's Climate Change Vulnerability Mapping Tool.
Also see the Massachusetts Climate Change Adaptation Report.

Inventory Existing Resources and Assess Climate Vulnerabilities

Understanding how a community will be vulnerable to climate change forms the basis for strategic action to assess and act on risks and opportunities. Through this Best Practice, a municipality would collect information to assess key vulnerabilities and risks to residents, economy, infrastructure, natural resources, and other municipal interests in order to prioritize climate change adaptation strategies and develop an action plan to deal with the impacts of climate change. A vulnerability assessment would include inventorying and characterizing infrastructure and critical municipal assets, utilizing local knowledge to benchmark the extent and nature of impacts from previous events, evaluating future scenarios, mapping vulnerable infrastructure, populations, and natural resources, and identifying factors that make these assets vulnerable to climate change.

Assistance to coastal communities is available through the MA Office of Coastal Zone Management's (CZM) Coastal Resilience Grant Program, for more information click here.

The StormSmart Coasts Program provides information, strategies, and tools to help communities address the challenges of erosion, flooding, storms, sea level rise, and other climate change impacts.
Also see the Massachusetts Climate Change Adaptation Report.
Finally, municipalities can seek assistance from their regional planning agency and apply for District Local Technical Assistance (DLTA) funding to collect information/inventory resources.
The Massachusetts Wildlife Climate Action Tool has basic information about climate change vulnerability assessment and climate change exposure that could be of assistance to communities.

Plan for Climate Change Adaptation

Through this Best Practice, a municipality would prepare a local (or participate in a regional) climate adaptation action plan. An action plan would ideally be developed as part of, or after completion of, a local or regional vulnerability assessment and would comprehensively assess risks, costs, and potential solutions for adapting to climate change, set short and long-term municipal goal and objectives and steps to attain them, and provide a road-map for implementation linked to these outcome based targets. The municipality could also elect to perform a scenario-based risk assessment in which the probable climate change impacts and potential adaptation actions are determined for various climate change scenarios. Furthermore, the municipality could gather stakeholder input on costs of various socio-economic scenarios and acceptable degree of risk. Adaptation plans should inform and be integrated into master, open space, and other local plans and as well as land use and other regulations in order to ensure long-term climate change preparedness, strategic land use decisions, and prudent municipal investments.

Assistance to coastal municipalities is available through CZM's Coastal Resilience Grant Program; for more information click here.
Guidance on integrating adaptation into open space and recreation plans is available through the Massachusetts Climate Action Tool.
Also see the Massachusetts Climate Change Adaptation Report.
Finally, municipalities can seek assistance from their regional planning agency and apply for District Local Technical Assistance (DLTA) funding to assess vulnerabilities and prepare an Adaptation Plan.
ICLEI-US (Local Governments for Sustainability) Climate Resilient Communities (CRC) Program helps municipalities develop climate adaptation plans. Their guidebook offers a step-by-step process to create a municipal adaptation plan and members have access to software (ADAPT) designed to help cities develop plans.

Implement Structural Improvements & Nature Based Approaches to Protect Buildings & Infrastructure

Through this Best Practice, a municipality would design, permit, and construct resilience measures to protect public buildings and infrastructure, related to municipal interests, such as schools, water supply, wastewater, stormwater, transportation, solid waste, hazardous waste, energy, and public safety and public health, against changing climatic conditions. Examples include adding on-site generators, removing obsolete dams, adapting structures such as undersized culverts or pump stations or green

infrastructure for resiliency against riverine flooding or increased groundwater elevations, and flood-proofing doors, electrical systems and air intakes.

Assistance is available through the following state programs:

- DOER's Community Clean Energy Resiliency Program
- CZM's Coastal Resilience Grant Program
- Executive Office of Energy & Environmental Affairs' Dam & Seawall Repair or Removal Program
- MA Department of Environmental Protection's State Revolving Fund Program
- MA Division of Ecological Restoration (dam removal, ecosystem restoration, etc.)

Encourage Sound Land Use

Future risk and costs can be minimized for new development and redevelopment through careful siting, and application of design standards that account for higher sea levels, more intense storms and precipitation events, and increased temperatures. Through this Best Practice, a municipality could reconsider infrastructure design standards to ensure that development preserves or restores natural hydrology and that systems have adequate capacities to handle predicted storm events, incentivize building standards that are protective against flooding or the heat island effect, and institute programs/regulations that guide development out of the areas likely to be impacted.

Another Best Practice could be to classify flood-prone areas by degree of risk, extent of existing development and corresponding investment, sensitivity of natural resources, and other factors and indicate how these areas could be addressed, including protection against sea level rise and riverine flooding; identification, protection, or acquisition of high-value land (such as large unfragmented open spaces and connecting corridors, and land that accommodates a potentially expanded floodplain or migrated wetlands); concentration of development on those portions of a parcel that are least vulnerable; transfer development rights from areas at risk and properties that have been damaged by storms; constructing parks that serve a dual purpose by accommodating additional flooding, and implementing other nature-based green infrastructure projects that restore natural hydrology to reduce flooding and improve water quality. Protecting natural infrastructure lands can help to buffer the impacts of flooding and provide water infiltration capacity and would have the dual function of providing wildlife habitat to sensitive species and improving water quality.

Resources include the Smart Growth/Smart Energy Toolkit, guidance on Low Impact Development, and the Massachusetts Climate Change Adaptation Report.
The Massachusetts MAPPR Tool and resilience data available from the Nature Conservancy are resources designed specifically to support consideration of land use related Best Practices.
The StormSmart Coasts Program provides information, strategies, and tools to help communities address the challenges of erosion, flooding, storms, sea level rise, and other climate change impacts.
Municipalities can also seek assistance from their regional planning agency and apply for District Local Technical Assistance (DLTA) funding to undertake efforts related to encouraging sound land use.

Prepare For Emergencies

Completing an Emergency Management Plan or otherwise preparing for emergencies is another Best Practice a municipality can select. Through this Best Practice, and using guidance from a completed vulnerability assessment if available, a community would evaluate and apply emergency management tools and capabilities in order to respond to the predicted increased frequency and intensity of extreme weather events associated with climate change. These tools include the State Risk Assessment Inventory, the Massachusetts Comprehensive Emergency Management Plan, the State Hazard Mitigation Plan, mapping and information systems, and other emergency management tools. Emergency preparedness resources have evolved in response to past emergencies and storm events. However, with more frequent and intense storm events, and with sea level continuing to rise, new and increased levels of exposure may arise; this will affect the design and development of future emergency preparedness plans.

For more information click on the following links:

- The Massachusetts Comprehensive Emergency Management Plan
- Hazard Mitigation Planning
- Emergency Preparedness and Public Health

Sustainable Development and Land Protection – Best Practices and Resources

There are many potential Best Practices a municipality can elect to pursue to conserve land, protect natural resources, and grow sustainably. Municipalities, through their zoning, control a key determinant of where and how growth occurs, and can adopt techniques that reduce energy, land, and natural resource consumption. By planning ahead, regulating growth effectively, and investing in infrastructure, land conservation, and park creation municipalities can protect the environment while enhancing quality of life for residents. Sustainable development and land protection may be enhanced by implementation of Best Practices such as the following:

Plan for the Future

Complete a Master Plan

Recognizing that the absence of a vision for the future and a plan to realize it can be quite problematic, a municipality can choose to produce a Master Plan as a Best Practice. A Master Plan outlines, using text, maps, and illustrations, the intent of a community – where and how it wants to see growth occur, and what land is desired for conservation. A Master Plan should be a community's "blueprint" for its future, guiding regulatory changes, land use policies, budgeting decisions, and other community choices about long-term physical development over a period of decades. Under state statute a Master Plan is to contain a Goals and Policies Statement; Land Use, Housing, Economic Development, Natural and Cultural Resources, Open Space and Recreation, Services and Facilities, and Circulation elements; and an Implementation Program. Ideally, a Master Plan will clearly indicate a community's desired future, and zoning and other regulations, infrastructure investments, land conservation expenditures, and other municipal actions that influence growth will implement the Plan.

Municipalities can seek assistance from their regional planning agency and apply for District Local Technical Assistance (DLTA) funding to complete a Master Plan. Also, consideration of Priority Protection and Development Areas outlined in an applicable Land Use Priority Plan is a good idea. Land Use Priority Plans and information on them can be found on the Executive Office of Housing and Community Development's Planning webpage.

Complete an Open Space and Recreation Plan (OSRP)

A municipality interested in preparing a strategy to protect natural resources, provide high quality outdoor recreation, and otherwise identify and pursue local open space priorities could complete an OSRP as a Best Practice. These plans guide a community's management of natural resources and recreational opportunities and facilities. Pro-active planning for natural resource protection and recreation is an important way of promoting stewardship of natural resources, and since the state's Division of Conservation Services (DCS) has a long-standing requirement for the completion and approval of an Open Space & Recreation Plan as a prerequisite, making the municipality eligible for state grant funding.

Guidance that defines the requirements for a municipal OSRP, explains the necessary data, and reviews pertinent conservation and recreation issues that need to be addressed in the Plan, is available from the Division of Conservation Services. Also available is a Workbook to help guide a municipality through the process of writing an Open Space and Recreation Plan without a professional consultant. In addition, tools like BioMap2, and the Mapping & Prioritizing Parcels for Resilience Tool (MAPPR), an online mapping tool designed for municipalities developed by Mass Audubon, the Nature Conservancy, and LandVest, will be useful and relevant to drafting an OSRP. Next, the Conservation Assistance for Small Communities Grant Program offers 80% reimbursement toward the cost of completing an OSRP, up to $8,000, for municipalities with less than 6,000 residents that are also applying for a state grant. Finally, EEA may be able to connect a community with a land trust, conservation group, or regional planning agency willing to help with an OSRP.

Use Zoning & Other Land Use Regulations to Conserve Land, Protect Natural Resources, & Promote Smart Growth

Adopt Natural Resource Protection Zoning (NRPZ), a zoning tool that includes elements of conservation subdivision regulations and cluster development bylaws and is used to regulate new subdivisions of land in a manner that maximizes the protection of natural resources (wetlands, forests, agriculture lands, open space) while providing for new construction and adequately compensating landowners.

A full set of materials for municipalities interested in pursuing Natural Resource Protection Zoning as a Best Practice is available in the MA Smart Growth/Smart Energy Toolkit NRPZ Module, including explanatory text and slide shows, a model bylaw, and case studies. Also, the Conservation Assistance for Small Communities Program offers 80% reimbursement for the costs of developing NRPZ, up to $8,000, for municipalities under 6,000 residents that are also applying for a state grant. Finally, Mass Audubon has been helping communities with NRPZ through its Shaping the Future of Your Community Program and EEA may be able to connect a community with them or another land trust or conservation group willing to help.

Adopt Transfer of Development Rights a zoning technique that harnesses private market forces to accomplish two smart growth objectives. First, open space is permanently protected for water supply, agricultural, habitat, recreational, or other purposes via the transfer of some or all of the development that would otherwise have occurred in these sensitive places to more suitable locations. Second, other locations, such as city and town centers or vacant and underutilized properties, become more vibrant and successful as the development potential from the protected resource areas is transferred to them. In essence, development rights are "transferred" from one district (the "sending district") to another (the "receiving district"). Municipalities using TDR are generally shifting development densities within the community to achieve open space and economic goals without changing their overall development potential.

A full set of materials for municipalities interested in pursuing TDR as a Best Practice is available in the MA Smart Growth/Smart Energy Toolkit TDR Module, including explanatory text and slide shows, a model bylaw, and case studies. In addition, municipalities can seek assistance from their

regional planning agency and apply for District Local Technical Assistance (DLTA) funding to pursue TDR zoning.

Adopt Traditional Neighborhood Development (TND), Village Center, or similar mixed-use zoning that is characterized by compact, pedestrian-oriented developments that provide a variety of uses, diverse housing types, and are anchored by a central public space and civic activity. TND and related zoning is based on the principle that neighborhoods should be walkable, affordable, accessible, distinctive, and in Massachusetts, true to the significant historic context of each community.

A full set of materials for municipalities interested in pursuing Traditional Neighborhood Development as a Best Practice is available in the MA Smart Growth/Smart Energy Toolkit TND Module, including explanatory text and slide shows, a model bylaw, and case studies. In addition, municipalities can seek assistance from their regional planning agency and apply for District Local Technical Assistance (DLTA) funding to pursue TND zoning.

Adopt Transit Oriented Development (TOD) to create a mixed-use, higher density neighborhood specifically designed to encourage people to live, work and shop near transit services and decrease their dependence on driving. TOD focuses land uses around a transit station or within a transit corridor. Typically, it is characterized by a mix of uses, moderate to high density, pedestrian orientation/connectivity, transportation choices, reduced parking, & high quality design. TOD reduces car travel and greenhouse gas emissions, increases property tax revenues, and provides convenient access to jobs and services.

A full set of materials for municipalities interested in pursuing Transit Oriented Development as a Best Practice is available in the MA Smart Growth/Smart Energy Toolkit TOD Module, including explanatory text and slide shows, a model bylaw, and case studies. In addition, municipalities can seek assistance from their regional planning agency and apply for District Local Technical Assistance (DLTA) funding to pursue zoning for TOD.

Adopt a tree retention bylaw/ordinance to minimize the loss of tree cover when a parcel is subdivided or redeveloped. Too often the majority of trees on a parcel are cleared when it is subdivided into a housing development, or cut when a house is torn down and replaced. Yet, a municipality can choose to establish regulations that require or provide incentive to developers to retain tree cover on a lot. Doing so will reduce energy use by homeowners in the development, produce less runoff and increase stormwater absorption, enhance property values, and provide other benefits.

Information, tree retention bylaws/ordinances, and other materials can be found on DCR's Urban and Community Forestry page. In addition, EEA may be able to connect a community with a conservation organization or regional planning agency willing to assist.

Invest Consistent with the Massachusetts Sustainable Development Principles

Invest in land conservation or park creation/improvement: Municipalities can decide to commit to additional conservation of priority parcels or the creation or renovation of parks as a Best Practice. A municipality can choose to protect key parcels identified in its Open Space and Recreation Plan,

buy land and create a new playground, develop a plan to act on its right of first refusal for properties leaving Chapter 61, restore neglected playing fields, or commit to any number of other possible open space investments.

Grants for land conservation and parks creation/restoration are available from the Division of Conservation Services. Also, EEA may be able to connect a community with a land trust or conservation group willing to help a community develop a land conservation/parks strategy or to aid in specific conservation projects.

Enhance consistency with a Land Use Priority Plan: modifying zoning, investing in infrastructure, and otherwise acting to enhance municipal consistency with a Land Use Priority Plan is another Best Practice a municipality could choose. The Commonwealth, working with regional planning agencies and municipalities, has produced plans to guide future land conservation and development for regions that contain about half the municipalities in the Commonwealth, and additional plans are anticipated. These plans contain local, regional, and state priority preservation and development areas. Through this Best Practice, a municipality can choose to enhance consistency with these priorities, which can be accomplished in a variety of ways including regulatory changes and investments in infrastructure or land conservation.

Land Use Priority Plans and information on them can be found on the Executive Office of Housing and Community Development's Planning webpage. Also, the Commonwealth's regional planning agencies have been involved in the development of Land Use Priority Plans and may be able to assist with this potential Best Practice.

Water Resource Management – Best Practices and Resources

Stewardship of the Commonwealth's natural resources, including our waters, is essential to long-term health and prosperity. Municipal water resources, including water supply, wastewater and stormwater systems, are critical and should be treated as valuable community assets. Moreover, they are expensive, requiring regular and sustained upkeep and rehabilitation. Thus, the cost-efficient management and long-term sustainability of those assets are crucial and may be enhanced by implementation of Best Practices such as the following:

Flooding and Stormwater

Require Localized Flood Protection Best Practices

Managing the movement of water during and in the aftermath of a rain event is critical at the local level to help protect human lives, public safety, infrastructure, and critical assets. Best practices include actions such as 1) acquiring land or using zoning or other regulations to protect areas of recharge, 2) ensuring that wetlands that perform the crucial function of absorbing water and acting as a buffer to the built environment are not built over, and 3) flood-proofing buildings and other infrastructure that are currently in the 100-year flood zone.

Click on the following links for more information:

- Dam and Seawall Repair or Removal Program
- CZM's Coastal Resilience Grant Program
- Smart Growth Toolkit

The Executive Office of Energy and Environmental Affairs may also be able to connect a community with a member of the Massachusetts Rivers Alliance or another conservation organization willing to assist with flooding related Best Practices.

Implement Stormwater Management Measures

Absent development, much of the stormwater that discharges to local water bodies would have soaked into the ground, replenishing the groundwater. To promote infiltration and control flooding from stormwater runoff, as a Best Practice municipalities may choose to institute subdivision, zoning, or other regulations that reduce impervious surface in new or existing developments or require the use of Low Impact Development (LID) techniques.

Click here for more information.

Stormwater also contributes to water pollution, washing pollutants from impervious surfaces (i.e. pavement), into the stormwater drainage system, and into nearby water bodies. For municipalities with stormwater systems, including those that are regulated under a NPDES Municipal Separate Storm Sewer System (MS4) Permit, Best Practices to reduce pollution and promote public education and outreach could include detection, elimination, and prevention of illicit discharges; mapping of

outfalls and receiving waters; outreach and education elements such as Household Hazardous Waste Days; regulations to control erosion, sedimentation, and construction site runoff; adoption and enforcement of stormwater bylaws; and implementation of stormwater utilities.

For more information on stormwater, including the MS4 permit, click here. For further information on the Massachusetts Stormwater Standards and associated handbook, click here. The Executive Office of Energy and Environmental Affairs may also be able to connect a community with a member of the Massachusetts Rivers Alliance or another conservation organization willing to assist with stormwater management related Best Practices.

Water and Wastewater Systems

Manage Water System Assets

Management of water infrastructure over the long-term is significantly improved when the owner has an inventory of the condition and age of assets within that system, and a strategy for regular investment in maintenance and rehabilitation of the infrastructure. As a Best Practice a municipality could elect to complete a water infrastructure inventory (water, wastewater, and/or stormwater) or develop a capital investment plan that addresses regular maintenance, rehabilitation, and replacement of system infrastructure.

Click here for more information.

Complete Water Audits and Mitigate Leaks

Water audits provide a municipality with a direct way of identifying and reducing water losses and revenue loss, and of making better use of water resources. A water audit helps a municipality select and implement programs to reduce distribution system losses. In addition to water audits, regular leak detection survey programs are another potential Best Practice that could provide critical information on system water losses and are an essential component of sound system management. Detecting and fixing leaks can provide one of the largest returns on investment, especially in older systems. Leaks are inevitable within Water Supply systems since the water is under pressure, the systems have hundreds or thousands of pipe connections, and those connections age and shift over time. Managing the scale and frequency of those leaks protects drinking water quality, and helps to prevent environmental impact caused by pumping additional water from sources, to compensate for the water lost to leaks.

Click on the following links for more information:

- Leak Mitigation
- Massachusetts' Water Conservation Standards

Protect Public Water Sources
Over 90 percent of the state's population depends on public water supply sources, which are vulnerable to surface water or groundwater contamination. Examples of threats include: 1) residential lawn care and gardening chemicals; 2) residential septic systems and cesspools; 3) residential fuel oil storage; 4) stormwater discharge; and 5) state-regulated underground storage tanks. Municipalities can manage and protect their water supply sources through better planning, active land acquisition, regulations that allow only limited use of watershed or well-head protected lands, inventorying land uses in protection areas for surface and ground water sources that may present potential threats to water quality; determining susceptibility of water supplies to contamination from these sources; and developing a plan or mechanism for containing or preventing contamination.

Click here for more information. The Executive Office of Energy and Environmental Affairs may also be able to connect a community with a member of the Massachusetts Rivers Alliance or another conservation group willing to assist with measure related to protecting public water sources. A community's regional planning agency may also be able to help.

Implement Water Conservation Measures
Using water efficiently is one of the best ways to ensure long-term sustainability of water resources and to maximize the value of the resource. Water conservation and greater efficiency of water use provide significant opportunity to generate economic, public health, and environmental benefits. Water conservation also allows a municipality to accommodate more growth within its existing capacity and avoid spending considerable resources (millions of dollars) to develop a new source. As a Best Practice a municipality could elect to complete a water conservation plan that indicates which water conservation measures the municipality intends to utilize and how it intends to do so, or institute a municipal water conservation program.

Click here for more information regarding the Massachusetts Water Conservation Standards and best water conservation practices.

Address Infiltration and Inflow (I&I)
The introduction of groundwater ("infiltration") or stormwater ("inflow") to the wastewater system places extra strain on that system, and frequently causes backups and overflows. The excess volume of water from I&I also burdens the treatment facilities and reduces their life expectancies. As a Best Practice a municipality could elect to perform an Infiltration/Inflow Analysis or a Sewer System Evaluation Survey, or take action to address the results of either.

MassDEP regulations at 314 CMR 12.04(2) govern I&I, and guidance may be found here*.

*MassDEP's I&I guidance is being updated in 2016 and will be posted on MassDEP's website, replacing the 1993 document.

Implement Energy Efficiency Measures and Generate Clean Energy
Energy efficiency (reducing energy consumption) and clean energy (generating energy through technologies such as wind and solar) provide water and wastewater systems opportunities to pursue Best Practices that reduce greenhouse gas emissions and costly electricity bills. As an example, pumping systems represent a major electrical load for both drinking water and wastewater

plants across Massachusetts -- approximately 90% of electric usage for water facilities and 20-30% at wastewater facilities. Thus, increasing energy efficiency of pumping systems is a potential Best Practice. MassDEP, in partnership with MA DOER, the Hydraulic Institute, National Grid, and Eversource, has provided in-depth instruction on the methodology and opportunities to increase energy efficiency in pumping systems. Implementation of a 'Pump System Optimization' practice can reduce facility operating and maintenance costs, and improve both efficiency and system performance. Municipalities could also elect to pursue generation of renewable energy to run treatment plants and other facilities as a Best Practice.

Click here for more information on the Clean Energy Results Program, and for further information regarding Pump System Optimization click here.

Operations and Management

Utilize Advanced Financing Tools

Potential Best Practices include adoption of an enterprise fund for water infrastructure, creation of a stormwater utility, or establishment of a water bank. An Enterprise Fund is an accounting mechanism that allows a municipality to track the cost to operate an enterprise, such as a drinking water or wastewater system, and collect revenue from users of that system, while keeping that revenue segregated from other community revenues and expenses. Enterprise Fund segregation helps to insure that water revenue is not diverted out of the system maintenance, into other community needs, thus promoting long-term sustainability.

As to a stormwater utility, Massachusetts municipalities are authorized under the General Laws to establish a stormwater management authority. The authority can then charge fees to property owners for stormwater management. Finally, a water bank is a system of accounting and paying for measures that offset or mitigate water losses due to water withdrawals, increased impervious area, and other impacts. For example a water bank could offset the impact of new development by requiring two gallons of new water savings through retention, reuse, or aquifer recharge for every gallon of new water demand due to construction, expansion, or change in use.

Click here for more information on Enterprise Funds

Click here for the Metropolitan Area Planning Council's Stormwater Financing/Utility Starter Kit

Establish Full Cost Pricing

Full Cost Pricing is an approach and potential Best Practice that works hand in hand with an Enterprise Account. Water infrastructure system operators analyze the true cost to provide water, sewer or stormwater management, including maintenance, rehabilitation and indirect costs, as well as the cost of protecting the resource and of mitigating the withdrawal, and build those into the rates assessed for the services, thus insuring that the fee for service is adequate.

Click here for more information.

Institute an Inter-Municipal Agreement

Regional approaches to water infrastructure services are often more economically and technically efficient than having each community construct and maintain its own individual system. Under this Best Practice, a group of municipalities collaborate to create an Inter-Municipal Agreement that establishes a framework for an equitable distribution and assessment of cost for the host community and the client partners that may seek to access that regional infrastructure.

Click here for more information.

Waste Management – Best Practices and Resources

Municipal solid waste and recycling programs come in all shapes and sizes from drop-off programs to those with curbside service. Local governments can save money and protect the environment by pursuing Best Practices that divert hazardous waste, encourage recycling, and reduce the overall amount of material being disposed. Solid waste programs may be enhanced by implementation of Best Practices such as the following:

Enhance Waste Ban Compliance

Waste bans are prohibitions on the disposal and transfer for disposal of certain toxic and/or recyclable items, e.g., paper, leaf and yard waste, and aluminum cans. Waste bans are intended to encourage reuse and/or recycling of certain waste materials, conserve disposal capacity, and reduce adverse environmental impacts from waste materials containing toxic substances. Through this Best Practice, a municipality would address how these materials will be more consistently diverted from the waste stream through their solid waste collection program.

Click here for more information.

Develop Waste Contracts - Contracting for Municipal Solid Waste and Recycling Services
Through this Best Practice, a municipality would develop a fiscally, environmentally, and otherwise beneficial contract for solid waste and recycling services. MassDEP has published guidance on how municipalities can develop effective municipal solid waste and recycling contracts.

For more information click here.

Reduce Municipal Solid Waste and Increase Recycling

In order to reduce waste and increase recycling a community could choose to offer incentive to property owners through a Save Money and Reduce Trash (SMART) or Pay-As-You-Throw (PAYT) Program that requires residents to pay per bag of trash disposed at the curb or transfer station.

A municipality could also establish a local mandatory recycling bylaw or ordinance, place a limit on the number of trash barrels collected per household, or comply with private hauler recycling regulations. A municipality can also expand the services it provides so that more materials are accepted for recycling (e.g., by adding organics and textile drop off points in the community) or provide for recycling in local buildings and schools.

Another option is to implement or enhance programs to educate property owners regarding waste and recycling. Participation by residents in a community's solid waste and recycling program ensures its success. Through this Best Practice, a municipality would evaluate comprehensive strategies, tips and techniques for planning, implementing, building and promoting programs aimed at throwing away less and recycling more, and providing education to residents, for example, to reduce contamination in single stream recycling programs many municipalities currently use.

Best Practices such as these can all be effective tools in reducing solid waste tonnage and municipal disposal costs.

For more information on PAYT click **here.**
For more information on mandatory recycling programs click here.
To access the MassDEP Municipal Waste Reduction Toolkit click here.

Additional state assistance available for implementing Solid Waste Best Practices through MassDEP:

Municipal Assistance Coordinators
MassDEP has eight Municipal Assistance Coordinators (MACs) who provide technical assistance on best practices for waste reduction and recycling to geographically-based groups of towns and cities.

Click here to find the MAC who serves your community.

Sustainable Materials Recovery Program (SMRP) Municipal Grants
MassDEP Sustainable Materials Recovery Program (SMRP) Municipal Grants offers funding to cities, towns and regional entities for recycling, composting, reuse and source reduction activities to increase diversion of municipal solid waste and household hazardous waste from disposal. Grants are available for recycling and composting equipment; Pay-As-You-Throw programs; waste reduction enforcement; school recycling; and organics capacity development projects. MassDEP accepts applications annually between early April and mid June.

Click here for more information.

Recycling Dividends Program
The Recycling Dividends Program (RDP) provides payments to municipalities that have implemented specific programs and policies proven to maximize reuse, recycling and waste reduction. The program and policy criteria (RDP criteria) define the characteristics of a model municipal recycling program, essentially functioning as a “best practices” framework.

Click here for more information.

Site Cleanup – Best Practices and Resources

Brownfield sites are properties that have been previously used, but are now abandoned or underutilized and likely contaminated. Brownfield sites represent both a challenge and an opportunity to municipalities. While liability and cost can be concerns, reuse can provide jobs and revenue while removing a potential health hazard. Brownfield sites often make good locations for solar energy facilities as siting them here has low natural resource impact and they aren't sensitive to residual contaminants. There are many potential Best Practices a municipality can elect to address site cleanup.

Complete a Brownfields Inventory

Creating an inventory of abandoned and underutilized industrial and commercial properties in the municipality is an important first step toward site cleanup, and a potential Best Practice. With a completed inventory a municipality can prioritize cleanup projects and apply for funding and other incentives offered by state and federal agencies.

Visit the Department of Environmental Protection's Brownfields Introduction and Brownfields pages for more information. The Brownfields page includes a Brownfields Resource Guide, a list of contacts, and a lot of other useful content.

Conduct Site Assessments

In order to understand a particular site and facilitate its redevelopment by a third party or the municipality itself a municipality could conduct a site assessment as a Best Practice. Undertaking a site assessment involves hiring a Licensed Site Professional (LSP) to oversee the assessment (and potentially future cleanup). Environmental site assessments are conducted in two phases and are used to determine the nature and extent of contamination that exists at a property. Once these are known, a plan of action can be developed.

Visit the Department of Environmental Protection's Brownfields Introduction and Brownfields pages for more information. The Brownfields page includes a Brownfields Resource Guide, a list of contacts, and a lot of other useful content.

Clean Sites

If a site assessment indicates that there is contamination present that exceeds limits, cleanup may be necessary to prevent further releases or the spreading of contaminants, and to protect public health. As with an assessment, an LSP will be needed to develop and implement a plan to address the contamination on the property. The type of cleanup required at a property depends on a number of factors such as location, type and amount of contaminant(s) present, how widespread and deep the contamination is, and the intended future use of the property. Cleanup most often includes removal or treatment of contaminated soil, capping and/or covering the contaminated area, mitigating vapor intrusion into indoor air, and cleaning up groundwater.

Lack of funding can be one of the biggest barriers to the cleanup of contaminated properties. EPA Brownfields Cleanup Grants are an excellent source of funding for cleanups. The Commonwealth of Massachusetts is another possibility; the largest source of cleanup funding at the state level is MassDevelopment's Brownfields Redevelopment Fund.

Visit the Department of Environmental Protection's Brownfields page for more information. The Brownfields page includes a Brownfields Resource Guide, a list of contacts, and a lot of other useful content.

Offer Tax Incentives

As a means of encouraging the assessment, cleanup, and reuse of a site a municipality could offer tax incentives as a Best Practice. For example, creation of a tax increment financing (TIF) district could help fund the cleanup and redevelopment of a contaminated property. TIF is a financing technique that repays bonds used to clean and redevelop a site with new or incremental tax revenues generated by the new construction/development.

The Department of Environmental Protection's Brownfields Fact Sheet and Brownfields page have information on tax incentives.

Update Regulations

In some instances, zoning and other land use regulations may be acting as a barrier to site cleanup and reuse. As a Best Practice a municipality could audit its applicable regulations, and institute changes necessary to encourage site redevelopment.

Visit the Department of Environmental Protection's Brownfields page (which includes a Brownfields Resource Guide, a list of contacts, and a lot of other useful content) and the Smart Growth Smart Energy Toolkit for information. Also, municipalities can seek assistance from their regional planning agency and apply for District Local Technical Assistance (DLTA) funding to enhance zoning.

Track Cleaned Sites with Activity & Use Limitations

Many sites are cleaned up with a specific future use in mind, such as capping contaminated soil under a parking lot. Such cleanups include deed notices known as Activity & Use Limitations to memorialize the limited cleanup. Changes in use on these properties without further cleanup could result in unacceptable exposure and risks. As a Best Practice a municipality could track sites with Activity & Use Limitations and consider the information when proposals are submitted to the Planning Board, Building Department or other municipal board.

For more information see DEP's Activity and Use Limitations page.

Engage & Educate Property Owners and the Public

Often property owners do not understand the process of, and resources available to assess, clean, and reuse a site. Similarly, the public is not necessarily informed about brownfields and the community's revitalization and reuse plans. As a Best Practice a municipality could elect to educate and engage these parties.

Local Agriculture & Silviculture – Best Practices and Resources

Municipalities have an important role to play in encouraging sustainable forestry, supporting local agriculture, and keeping Massachusetts' food supply safe and secure. By promoting local natural resource based businesses municipalities are working to keep agriculture and forestry economically and environmentally sound. Local agriculture and forestry may be enhanced by implementation of Best Practices such as the following:

Adopt a Right to Farm Bylaw

Through this Best Practice, a municipality can choose to adopt a Right to Farm bylaw (or ordinance in the case of a city) which clearly states that agriculture is a community priority, encourages the pursuit of agriculture, and allows agricultural uses and related activities to exist by minimizing conflict with abutters and town agencies. This type of bylaw, which is intended to protect the right to farm under Article 97 of the Constitution and several state statutes, may be adopted pursuant to a town's authority under Article 89 of the Articles of Amendment to the Massachusetts Constitution, known as the "Home Rule Amendment". Click here for more information, and here for an example of a model Right to Farm Bylaw. In addition, the Executive Office of Energy and Environmental Affairs may be able to connect the community with a conservation group or regional planning agency willing to assist with the adoption of a Right to Farm bylaw.

Establish an Agricultural Commission

Through this Best Practice a municipality could choose to establish an Agricultural Commission via a local bylaw or ordinance. Agricultural Commissions act as advocates for local farms. Responsibilities, determined locally, typically include protecting farmland, providing assistance for natural resource management, helping resolve farm related conflicts, affording visibility to local farmers and foresters, and assisting local boards with community development decisions. They are often established in concert with the creation of a Right to Farm Bylaw, and assume responsibility for its implementation.

Assistance is available from the Massachusetts Department of Agricultural Resources on their Agricultural Commissions page and a Toolkit for Organizing an Agriculture Commission is available.

Establish a Local Farmers' Market

As defined by the Massachusetts Department of Agricultural Resources, a Farmers' Market is "a public market for the primary purpose of connecting, and mutually benefiting, Massachusetts farmers, communities and shoppers while promoting and selling products grown and raised by participating farmers". Through this Best Practice, a municipality can elect to establish and promote a local farmers' market, thereby supporting local agriculture and the purchasing of fresh, local food. In order to be recognized as a Massachusetts farmers' market, the market must fulfill the criteria within the MDAR's Farmers' Market Policy. Click here for more information and to see the resources that MDAR provides to municipalities trying to start a Farmers' Market, and click here for more information on managing your Farmer's Market.

Support Sustainable Forestry

A municipality interested in Sustainable Forestry as a Best Practice can elect to join the Working Forest Initiative whose goal is to increase excellent forestry on private and municipal forests, help the forest economy in rural areas, improve forest habitats, and assist in the conservation of forest land. A municipality could also choose to complete Forest Stewardship Plans for municipal properties (grants are available from the Dept. of Conservation and Recreation (DCR)), which in addition to the direct benefits also helps demonstrate the value of good, careful forestry to the community. Such a plan begins with an on-the-ground inventory of the forest to assess its condition, age, growth, and other factors, followed by collaboration with a private forester who helps the owner develop a plan of action to meet their goals which may include improvement for habitat, timber, water supply, or recreation. In addition, as a Best Practice a municipality could commit to a campaign to encourage private landowners to engage in sustainable forestry. Means of doing so could include working with DCR and UMass Extension to hold a "Woods Forum" to engage private forest owners, using wood from community forests for municipal projects, or establishing a "wood bank" for firewood for low income residents. In addition to assistance from state agencies, conservation groups may be able to help, and the Executive Office of Energy and Environmental Affairs stands ready to help connect the community with a land trust or other appropriate organization.

Increase Agriculture Marketing

Through this Best Practice a municipality can elect to increase marketing around its local agriculture. The Division of Agricultural Markets under the Massachusetts Department of Agricultural Resources offers technical assistance and grant opportunities related to marketing and outreach. By increasing local marketing, communities take the initiative to keep Massachusetts agriculture economically sustainable and local agricultural products and nutritious foods abundant. Click here for more information.

Support Aquaculture

Through this Best Practice a municipality can choose to support businesses interested in pursuing local aquaculture. Aquaculture in its basic terms refers to the cultivation of aquatic plants or animals for food, research, or recreational purposes. The Aquaculture Specialist's Office at the Massachusetts Department of Agricultural Resources provides services and resources to assist in the promotion and development of Massachusetts aquaculture. Click here for more information.

Promote Urban Agriculture

Through this Best Practice a municipality could choose to explore or enhance the feasibility of urban agriculture. By promoting urban agriculture, a municipality would support increased access to fresh produce and community revitalization. Under the Massachusetts Department of Agriculture's Urban Agriculture Program, municipalities could be assisted in implementing this Best Practice through resources and technical assistance designed to support commercial urban farming enterprises.

For a municipality looking for an alternative to commercial urban farming, an opportunity is still available to grow food or horticultural varieties in an urban setting through the establishment of community gardens as a Best Practice. Gardens are often managed by community groups who allocate specific plots of land to citizens on an annual basis.

Click here for more information, and here for additional resources on urban agriculture.

Conserve Farm and Commercial Forest Land

Municipalities concerned with the development potential of existing agricultural and forest lands can choose to adopt zoning bylaws/ordinances specifically designed to protect these open tracts of land. Possibilities include Natural Resource Protection Zoning and related cluster development techniques and Transfer of Development Rights. These provisions ensure that the protection of open space will be maximized as lands transition from farmland to residential development. Information on zoning protections for agricultural land, transfer of development rights, and natural resource protection zoning can be found in the MA Smart Growth/Smart Energy Toolkit.

In addition to using zoning to limit the loss of farm and forest land to development, a municipality can permanently conserve it as a Best Practice. See the section on Land Conservation & Sustainable Development Best Practices. In addition to local funds for land conservation, including those raised through the Community Preservation Act (information is available from the Community Preservation Coalition), a variety of grants for land conservation are available from the Division of Conservation Services at the Executive Office of Energy and Environmental Affairs. In addition, municipalities can encourage, provide the required local match, and otherwise assist landowners in applying to the Agricultural Preservation Restriction Program at the Department of Agricultural Resources. Finally, the Executive Office may be able to connect a community with a land trust or conservation group willing to help with land conservation efforts.

Source Locally Grown or Produced Foods for Local Schools

Serving locally-grown products in schools improves the nutritional value and flavor of meals while helping farmers earn a profit. Municipalities can commit to sourcing locally grown or produced foods as a Best Practice.

The Massachusetts Department of Agriculture has more information on it Farm to School Project page.

Support Local Horticulture and Floriculture

Municipalities can support local businesses by purchasing flowers and trees from local nurseries. The nursery industry, the largest agriculture industry sector, as well as florists, will benefit from municipal pursuit of this Best Practice.

Plant Trees

Through this Best Practice, a municipality can choose to pursue the planting of a meaningful number of trees in order to realize their benefits in an urban setting which include reduced energy use and

associated GHG emissions, greater stormwater absorption, and enhanced property values. Municipalities can also adopt a tree retention bylaw to reduce the removal of mature trees occurring in new development or redevelopment in the community. The Executive Office of Energy and Environmental Affairs has a model bylaw and the Department of Conservation and Recreation's Urban Forestry Program page has information including existing models from Lexington or Wellesley to follow.

In addition, the Massachusetts Department of Conservation and Recreation's Urban and Community Forestry Program can provide information and assistance to municipalities.